TECH LINK

January 2020, Volume 22, No. 1

GM Loan Tool Program

OFFERS COST-EFFECTIVE ACCESS TO SPECIAL TOOLS

The GM Loan Tool Program (LTP) supplements the U.S. Essential Tool Program as a cost-effective alternative to purchases of high cost and/or infrequently used special tools. It does not replace essential tool shipments, but provides access to costly and infrequently used special tools. Tools in the program range in retail price from $10 to $3,000. The Loan Tool Program was put in place in response to dealership surveys regarding special tool cost and availability and is designed to help save dealerships significant special tool costs.

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Accessory Rear Seat Infotainment Turns Off When Doors are Closed

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GM Loan Tool Program

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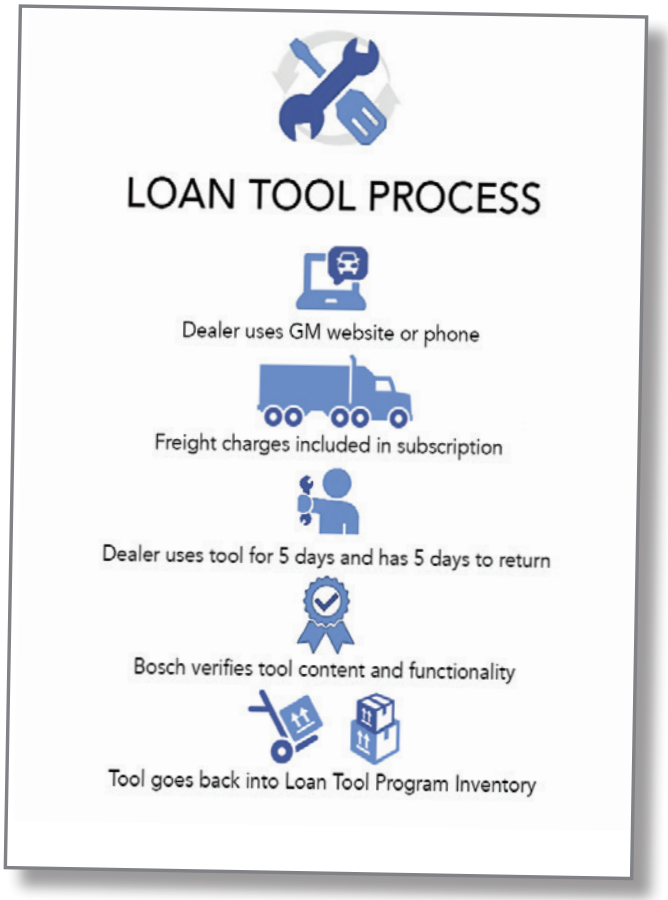
Special tools in the Loan Tool Program can be requested through the GM Special Tools website.

TIP: Dealerships must access the GM Special Tools website through the GlobalConnect link in order to enable the Loan Tool button.

Once a tool has been selected for loan on the website, the tool will be shipped to the dealership via UPS 2-day ground (overnight shipping is available by request at an additional charge) and then, after five days of use, the dealership returns the tool to the central distribution warehouse in Romeoville, IL.

The Loan Tool Program is coordinated and managed by Bosch Automotive Service Solutions. The LTP is dealer-funded by all U.S. dealerships through an annual subscription fee of $550 (billed through the dealership Open Account), which includes outbound and inbound ground shipping. (Dealerships with multiple franchises at the same address are charged only one subscription fee for the program.)

LOAN TOOL PROGRAM INVENTORY

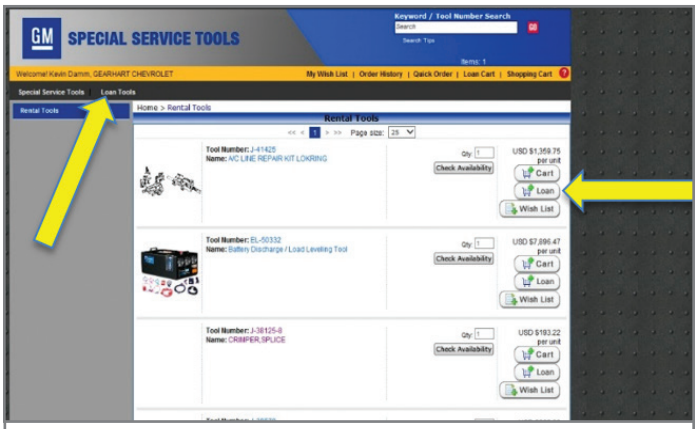


Select special tools for all GM divisions are included in the Loan Tool Program inventory, including high cost engine and transmission unit repair tools as well as special tools for low volume GM models.

In some cases, the deferment of just one special tool to the Loan Tool Program can offset the annual subscription fee (for example, the EL-51470 Night Vision Camera Alignment Target has a cost of $2,661).

In recent dealer feedback, service managers have indicated that tool costs and underutilization are two of their biggest concerns regarding special tools. Additionally, surveys show that hard-to-find, division-specific or lost special tools must be readily available in order to make repairs correctly and efficiently.

ORDERING A SPECIAL TOOL



To request a loan tool, go to the GM Special Tools website via the Global Connect link.

The Loan Tool Program features a simple process for requesting special tools.

1. Dealership contacts Bosch via the GlobalConnect link to the GM Special Tools website. Once on the site, select the Loan Tools feature and enter the desired tool number in the Search box. If the desired tool is available for loan, select the Loan cart button to initiate the transaction.
2. Fill out the request form and click Place Loan Request.
3. Bosch processes the loan tool request and ships the tool. 2-day shipping is included in the program (an overnight shipping option is an extra charge calculated at check-out).

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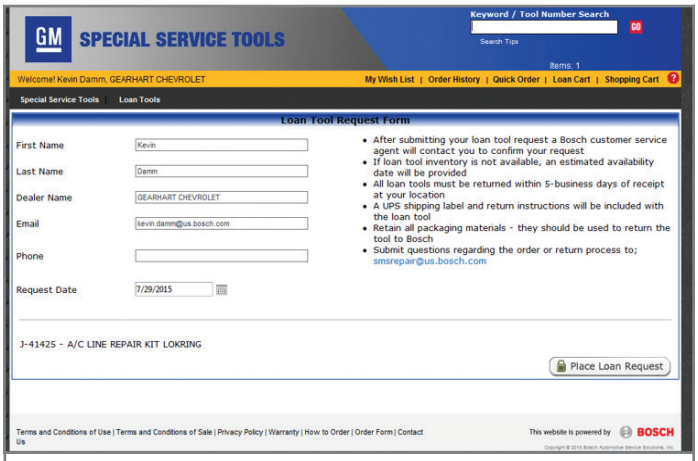


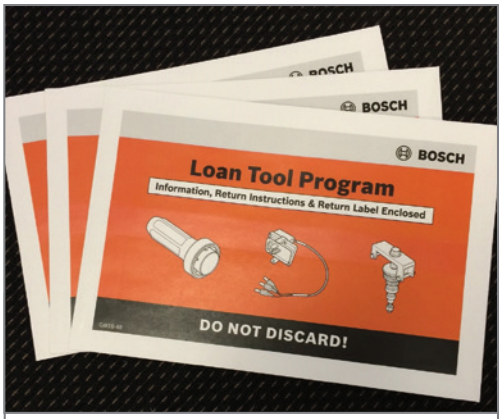
Fill out the request form for a loan tool.

4. Dealership has use of the tool for 5 days and then returns the tool using the provided return instructions and label. The loan tool requestor will receive two email messages from Bosch as reminders to return the tool.

Incomplete or unreturned tools will be charged to the dealership at a rate of 2x the retail price of the tool.

5. Bosch receives the returned loan tool, verifies its functionality, and places it back in the loan tool inventory.

Each year, certain new tools, including new product launch tools, will be evaluated for addition to the Loan Tool Program. Currently, over 40 percent of all special service tools are available through the Loan Tool Program.



Keep the tool for five days and then return it using the instructions and label provided.

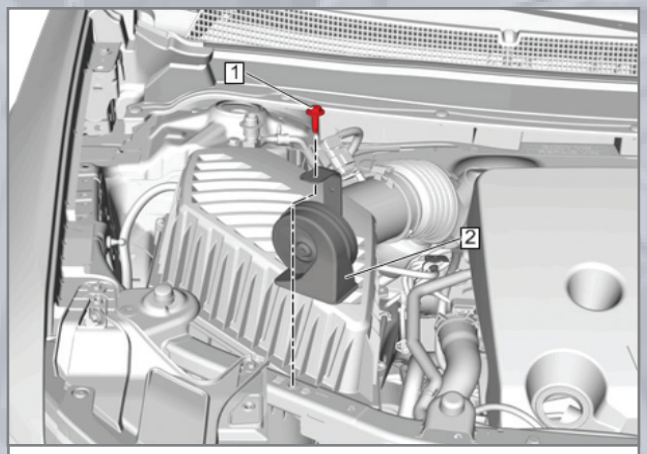
Dealerships have the option to purchase all special tools available through the LTP via the online catalog or by calling 1-800-GM-TOOLS.

▶ Thanks to Rick Jackson

HORN sounds

MUFFLED OR DISTORTED

The horn may sound muffled, distorted or sounds only the high note on some 2018-2020 Enclave and Traverse models. These horn conditions may be caused by a frequency that distorts the horn sound when it reflects off the original horn assembly bracket.



Right-side horn assembly

To address the distorted horn sounds, replace the right-side low note horn assembly. Refer to Horn Replacement (Right Side) in the appropriate Service Information. The Intake Air Splash Shield must be removed in order to access the horn assembly.

Refer to Bulletin #19-NA-278 for additional information and part numbers.

▶ Thanks to Zach Gillet

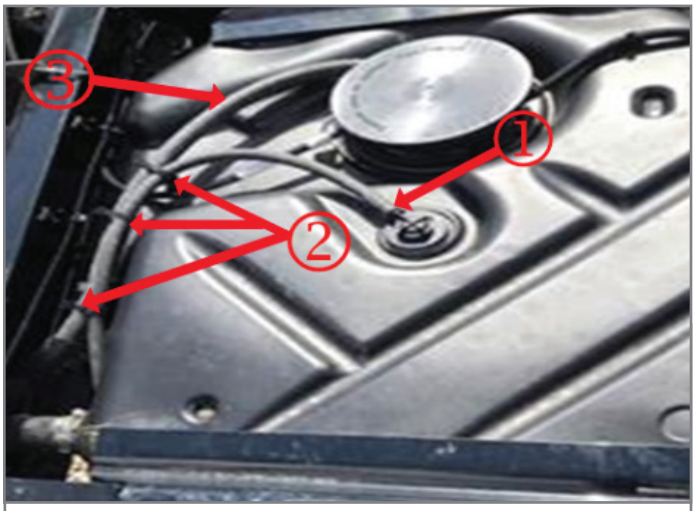
REAR FUEL TANK

AND FUEL TRANSFER CONDITIONS

Some 2015-2018 Silverado and Sierra models and 2019 Silverado 2500/3500 and Sierra 2500/3500 models equipped with the 6.6L Duramax diesel engine (RPOs LML, L5P) and dual fuel tanks (23.5 gallon/89 liter front tank and 40 gallon/151 liter rear tank) (RPO N2N) may have poor fuel transfer or the rear fuel tank may have collapsed.

Collapsed rear tank

These conditions may be caused by dirt and debris collecting on the top of the rear tank and plugging the vent, resulting in the fuel tank being pulled into a vacuum and bending the fuel tank fuel pump module.



1. New hose added to vent
2. Secure with zip ties
3. Fuel feed line

1. Dirt plugging vent
2. Bent fuel pump

If these conditions are found, replace the fuel tank and fuel pump module. Refer to Fuel Tank Fuel Pump Module Replacement in the appropriate Service Information.

In addition, to help prevent the vent from becoming plugged again, install a piece of fuel hose to the vent and route it down the fuel feed line. Secure the hose with zip ties.

Refer to Bulletin #19-NA-277 for additional information and part numbers.

▶ Thanks to Kevin Minor

Accessory Rear Seat Infotainment Turns Off When Doors are Closed

The Accessory Rear Seat Infotainment (RSI) system on some 2018-2020 Enclave and Traverse models equipped with ventilated front seats (RPO KU9) may power off when the vehicle doors or the liftgate is closed. The cause of this condition may be that the RSI system is powered by the interruptible Retained Accessory Power (iRAP) feed. When the vehicle's Passive Entry Passive Start (PEPS) module searches for the key transmitter when the last door or the liftgate is closed, it momentarily powers down the iRAP feed in order to clear any possible radio frequency interference, which results in the RSI screen powering off.

Rear Seat Infotainment system

VERIFY THE CONDITION

Before making any repairs, verify the condition is as described: RSI screen powered on, and the vehicle ignition is in On/Run/Start (green indicator on engine start/stop button). The screen will power off when the last door or liftgate is closed.

- With the key transmitter inside the vehicle, the issue will be intermittent and usually occur more often if the transmitter is closer to the wireless phone charger.
- When the key transmitter outside the vehicle, the issue will occur every time the last door or liftgate is closed.

A new audio player wiring harness to the RSI power feed can be installed to address the screens powering off. The harness assembly will add a second power feed (ignition) to the RSI kit to supply power to the RSI system while the iRAP feed is temporarily unavailable.

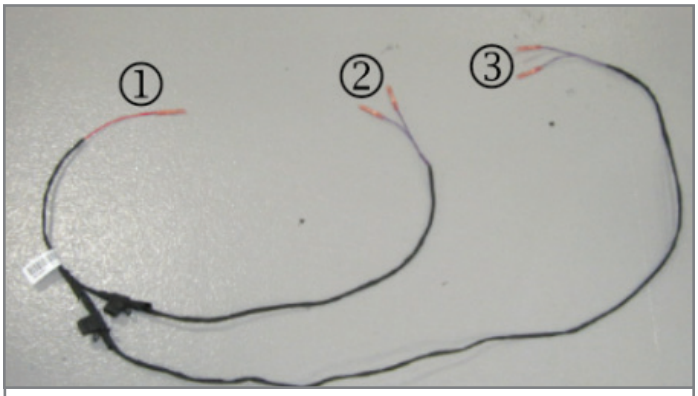
The audio player wiring harness assembly can be obtained from the Warranty Parts Center using the TSP Dealer Request Form. Go to Global Connect > Service Department > Service Forms App > General Information tab > TSP Dealer Request Form.

INSTALLING THE HARNESS

Refer to Bulletin #19-NA-271 for complete details on installing the harness assembly and parts information.

Audio player wiring harness

The new harness assembly will be spliced into the RSI monitor wire (#1), the RSI power feed (#2), and the passenger's vented seat wiring power feed (#3).



Splice the new harness into the RSI monitor wire (1), RSI power feed (2), and passenger's vented seat wiring power feed (3).

Remove the fuse panel from the mounting bracket and remove the rear cover for access to the RSI monitor wire and RSI power feed. The splice location in the passenger's vented seat harness is under the passenger seat.

▶ Thanks to Peter Allen

Front Brake Squeal Sound

Some 2020 XT4 models may have a brake squeal sound at low speeds. The front brake pads on some models may be susceptible to producing brake squeal.

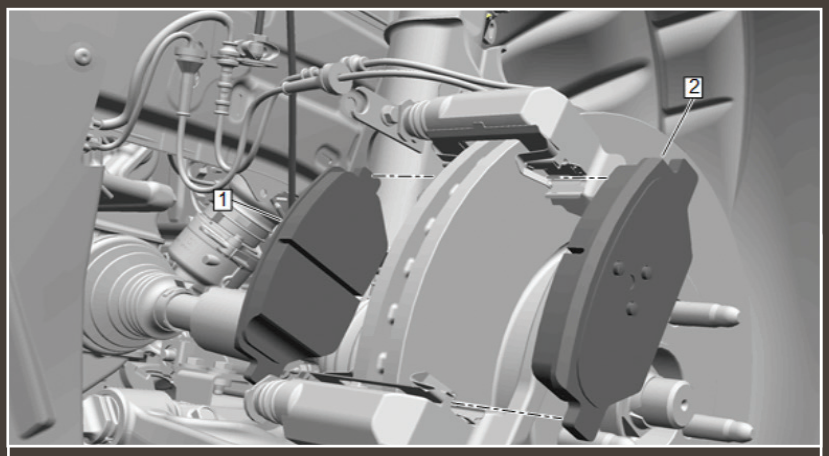
Confirm the brake squeal is coming from the front brake pads. If verified, replace the front brake pads with a new design brake pad. Refer to Front Disc Brake Pads Replacement in the appropriate Service Information.

TIP: Disconnect the battery to prevent the brake master cylinder from pressurizing the hydraulic system during its automated self-diagnostic tests that can occur when a door is opened or the key transmitter is activated.

The disc brake pads are adhered to the caliper piston using an adhesive patch and must be separated. Do not insert a pry tool through the bridge window to pry against the piston face, which can damage the brake caliper piston. Loosen the inner brake pad by twisting a screwdriver between the inner brake pad and the brake caliper. Do not allow the screwdriver to touch the brake caliper guide pin seal.

Refer to Bulletin #20-NA-002 for additional information and part numbers.

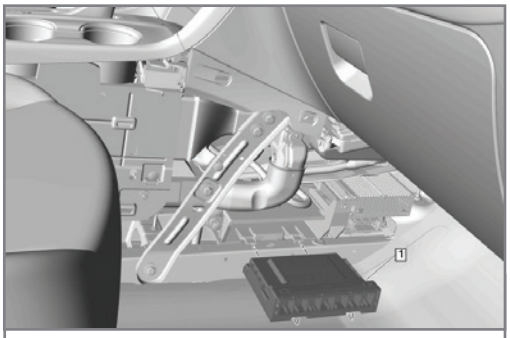
▶ Thanks to Calvin Kohring



Front brake pads

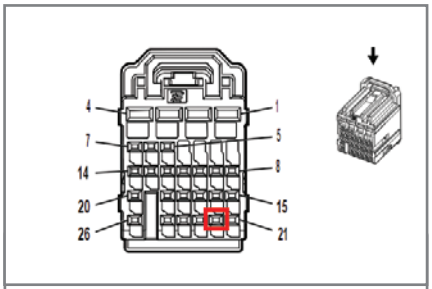
DTC P0747 Setting at Engine Start-up

DTC P0747 (Transmission Control Solenoid Valve 1 Stuck On) may be setting at engine start-up when the transmission is in Park on some 2017-2019 Cruze; 2017-2020 Malibu; 2018-2020 Enclave, Envision, Regal, Equinox, Traverse, Terrain; 2018-2019 LaCrosse; 2019-2020 Blazer, XT4; and 2020 Acadia, XT5, XT6 models equipped with the 9T45 automatic transmission (RPO M3G), 9T50 automatic transmission (RPOs M3D, M3E, M3H), 9T60 automatic transmission (RPOs M3G, M3T), or 9T65 automatic transmission (RPOs M3V, M3W).



Typical BCM location (Equinox shown)

DTC P0747 may be setting due to the Body Control Module (BCM) not continuing to supply ignition voltage to the Transmission Control Module (TCM) after engine shut down to allow the modules to perform a power-down self-test. If ignition voltage is not present from BCM connector X4, terminal 22, for a minimum of 15 seconds after the ignition is cycled off, the modules will not complete the power-down self-test. As a result, during engine cranking, the BCM will see data from where the self-test stopped and, typically, will see engine RPMs during cranking, which may set DTC P0747.



BCM connector X4, terminal 22

After the engine has been running, check if ignition voltage is present at BCM connector X4, terminal 22, for a minimum of 15 seconds from the BCM after the ignition is cycled off. If the ignition voltage is not present for a minimum of 15 seconds, check all BCM power and ground connections. If no concerns are found, replace and program the BCM.

▶ Thanks to Mark Kevnick and Tom Ellison

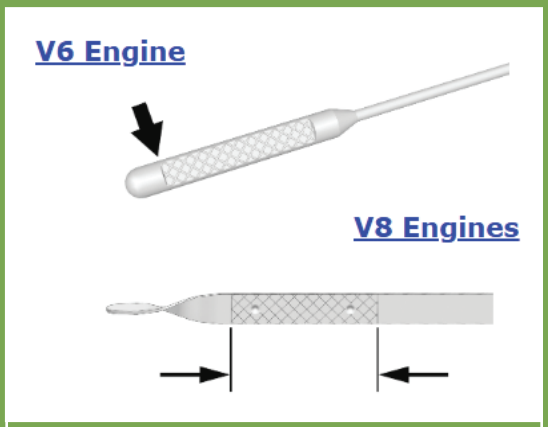
Engine Oil Overfill May Lead to Engine Vibration

An engine vibration condition may occur when the vehicle is stationary or accelerating from a stop on some 2014-2018 Silverado, Sierra; 2015-2020 Escalade, Tahoe, Suburban, Yukon; 2016-2019 CTS-V; 2016-2020 Camaro; 2018-2020 Express, Savana; 2019 Silverado LD, Sierra Limited; and 2019-2020 Silverado and Sierra models.

The vibration may be due to an overfilled engine crankcase on the following engines: 4.3L V6 (RPO LV1, LV3); 5.3L V8 (RPO L82, L83, L84); 6.2L V8 (RPOs LT1, LT4, L86, L87). It may be found that the engine oil was recently changed.

If there is an engine vibration concern, check the engine oil level. Refer to the vehicle's Owner's Manual for details on correctly checking the engine oil level and the engine oil crankcase capacity.

A vibration caused by a crankcase overfilled with engine oil will typically display Engine 1 (E1) as the dominant vibration when monitoring the vibration using the CH-51450 PicoScope automotive oscilloscope.



Check the engine oil level.

After confirming the engine crankcase is overfilled, if the crankcase is overfilled with engine oil or is contaminated by an outside substance such as fuel or engine coolant.

If the engine was overfilled only with engine oil, adjust the oil level and check engine operation. It's possible that the engine was simply overfilled during an oil change or other maintenance service.

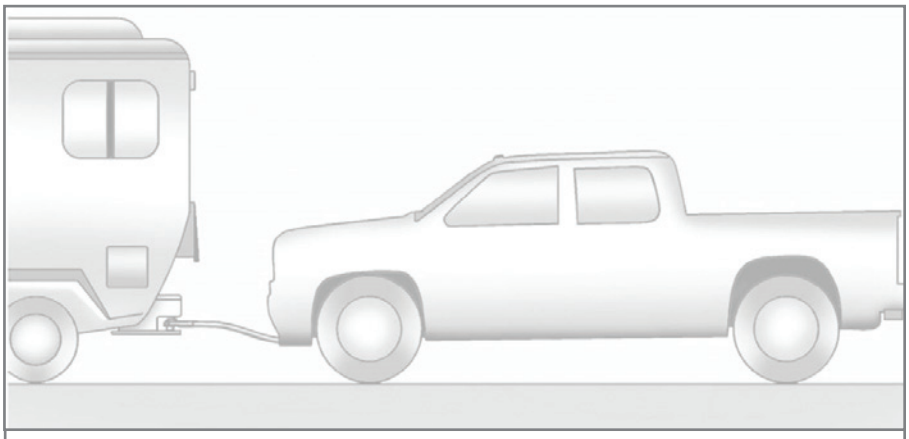
If the engine overfill was the result of contamination, diagnose the source of the contamination and make repairs as needed.

▶ Thanks to Tim Lightfoot

Dinghy Towing the Colorado and Canyon

If a 2017-2020 Colorado or Canyon model will not move or the transmission slips when shifted into any gear range immediately after flat towing the vehicle, inspect the internal components of the transmission for any signs of severe overheating due to a lack of lubrication. Repair the vehicle as needed.

The dinghy towing procedure may not be clear in the Owner's Manual of the 2017-2020 Colorado and Canyon. If the vehicle is not towed correctly, damage may occur to the transmission.



Do not tow two-wheel drive vehicles with all four wheels on the ground.

DINGHY TOWING

Two-wheel drive vehicles should not be towed with all four wheels on the ground (dinghy towing). If a two-wheel drive vehicle is towed with all four wheels on the ground, drivetrain damage may occur.

Four-wheel drive vehicles can be dinghy towed if the vehicle has a Neutral and Four-Wheel Drive Low setting.

Before dinghy towing a four-wheel drive vehicle, with the parking brake applied and the engine running, shift the transfer case to Neutral (N). Check that the vehicle is in Neutral by shifting the transmission to Reverse and then to Drive. There should not be any movement of the vehicle while shifting. Shift the transmission to Park.

Also disconnect the negative battery cable at the battery and cover the negative battery post with a non-conductive material to prevent any contact with the negative battery terminal. Keep the ignition in the Accessory position to prevent the steering column from locking. The steering column may be damaged if it is locked.

Refer to #PIP5699 for additional information.

▶ Thanks to Steve Schipansky

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